

HUNGARY/Atomic and Molecular Physics - Statistical Physics. Ther- D-3
modynamics

Abs Jour : Ref Zhur - Fizika, No 8, 1958, No 17727

Author : ~~Schay G.~~ Varsanyi G., Billes F.

Inst : Institute of Physical Chemistry, Polytechnic University,
Budapest

Title : Isothermal Vapor-Liquid Phase Diagrams Determined Statistically
by Means of Spectroscopic Analysis

Orig Pub : Period. polytechn., 1957, 1, No 2, 131-140

Abstract : The thermodynamic relations were used to derive an expression for the vapor pressure of a liquid mixture and for the coefficient of activity, in terms of the known values of the volume concentration of the components in the saturated vapor. The concentration of the components and the saturated vapor was determined spectroscopically from the intensity of the absorption spectra using a method previously described (Ref-erent Zhur Fizika, 1956, No 3, 8738). The formulas obtained are applied to the calculation of a benzol.-chlorobenzol system.

Card : 1/2

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SCHAY, G.

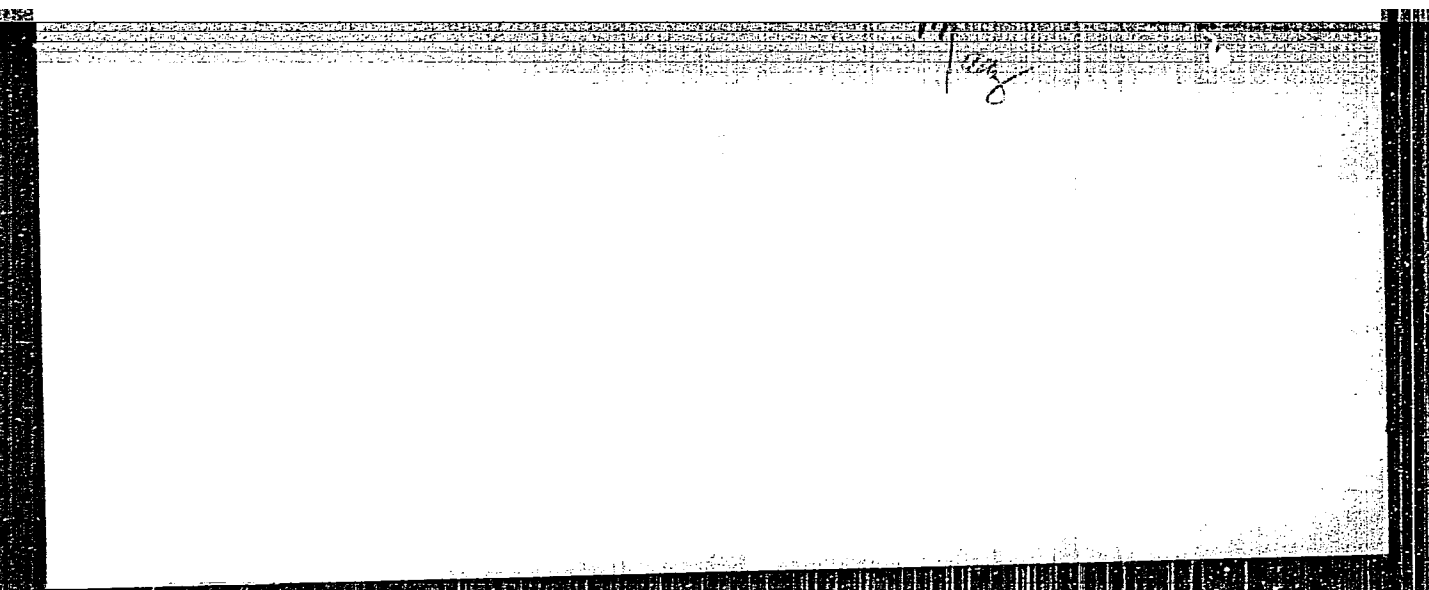
Results up to now and further goals of the Central Chemical Research Institute of the Hungarian Academy of Sciences.

p. 205 (Kozelmenyel) Vol. 48, no. 2/3 1957

SO: Monthly Index of East European Accessions (AEEI) Vol. 6, no. 11 November 1957

"APPROVED FOR RELEASE: 03/14/2001

CIA-RDP86-00513R001447520011-6



APPROVED FOR RELEASE: 03/14/2001

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Acta Chimica
Academiae Scientiarum Hungaricae
Vol. 12, Nrs. 3-4, 1957

STUDIES ON THE ADSORPTION OF GAS MIXTURES, I.

STATISTICAL THEORY OF PHYSICAL ADSORPTION
OF THE LANGMUIR-TYPE IN MULTICOMPONENT SYSTEMS

G. SCHAY, P. FEJES and J. SZATHMÁRY

(Central Research Institute for Chemistry, Hungarian Academy of Sciences, Budapest
and Institute for Physical Chemistry, Technical University, Budapest)

Received September 5, 1956

Summary

The theory developed formerly by G. SCHAY for the case of a pure gas is extended to the case of simultaneous adsorption of more than one gas. Expressions, analogous in form to those of MAHLAU and BENTON, are derived for the amounts adsorbed from the individual components. The empirical fact that the limiting Langmuir values are different from gas to gas is explained on the basis of the size of the molecules, the surface being accepted as the basis of the derivation, being treated as a mobile two-dimensional lattice. The theory, in accordance with experimental data, indicates that the adsorption of gas mixtures is not taken with some heat. The use of the theory for the case of gas mixtures is illustrated by the example of the adsorption of nitrogen on activated carbon.

✓ 24. Studies on the adsorption of gas mixtures. 11. A new chromatographic method for determination of mixed adsorption; adsorption of CO_2 - C_2H_2 mixtures on charcoal. (In English) G. Schay, Gy. Székely, G. Szigetváry. *Acta Chimica Academiae Scientiarum Hungaricae*. Vol. 12, 1957, No. 3-4, pp. 309-324, 5 figs. — 4

A new method of frontal gas chromatography has been evolved for determining the adsorption isotherms of pure gases and of mixtures. The method is based on continuous measurement and comparison of the rate at which the gas is fed onto and issues from the adsorption column. If the adsorbable gas displaces an inert gas with which the column was previously charged, the volume passing out until the breakthrough of the adsorbable gas gives the dead volume capacity of the apparatus, therefore there is no need for a separate determination of the latter. Isotherms of both pure and mixed CO_2 and C_2H_2 were determined by the method developed and the results compared with the theory derived in the previous study. — 9

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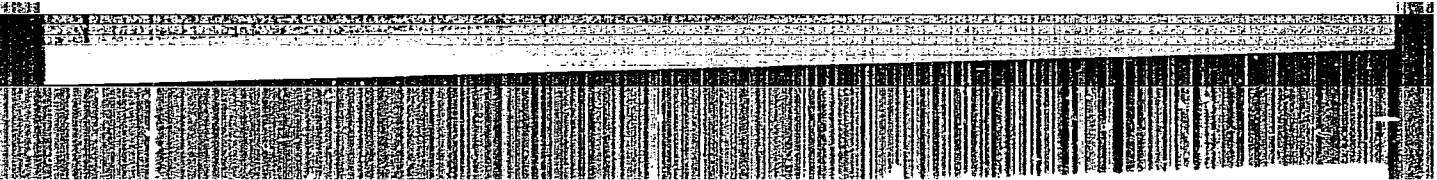
A short survey is given of investigations on adsorption which, in the course of the last years, were carried out in the Institute of Physical Chemistry of the Technical University.

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COMMUNIST CHINA / Physical Chemistry. Thermodynamics. B
Thermochemistry. Equilibria. Physico-
Chemical Analysis.

Abs Jour: Ref Zhur-Khimiya, No 24, 1958, 80650.

Abstract: tration of each component in the saturated vapor. These concentrations are determined by an optical method. Quantitative analysis, based on absorption spectra, was described previously (Ref Zhur-Khimiya, 1956, 26034). An introduction of this relationship is applicable to Benzene-Benzene Chloride system at 26°. The $p - x$ and $\log \gamma - \log x$ curves were thus constructed in which X =mol fraction. The results obtained with the aid of statistical method correspond to true thermodynamic equilibrium and follow the Gibbs-Dunham equation.

Card 2/2

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Determination of adsorption isotherms of gases by frontal chromatography. G. Schay, G. Székely, and P. Fejes (Univ. Tech., Budapest, Hung.). *Hua Hsueh Hsueh Pao* 23, 421-7 (in English, 427-37) (1957).—A new method is used to det. the adsorption isotherms of gases and gas mixts. The basis of the method lies in the measurement and comparison of the rates at which the various gases enter and leave the adsorption system. N. C. Li

Jeff

SCHAY, G.

Use of the Hydrostatical scale for measuring the adsorption of gases (steams).
p. 14. (Magyar Kemiai Folyoirat, Vol. 63, No. 1, Jan 1957, Budapest, Hungary)

SC: Monthly List of East European Accessions (EEAL) LC, Vol. 6, No. 8, Aug 1957. Uncl.

SCHAY, Geza

HUNGARY/Physical Chemistry - Surface Phenomena, Adsorption, Chromatography, Ion Interchange.

B-13

Abs Jour: Referat. Zhurnal Khimiya, No 2, 1958, 4005.

Author : Geza Schay, Pal Fejes, Istvan Halasz, Janos Kiraly.

Inst :

Title : Determination of Adsorption Isotherms by Gas Chromatographic Method.

Orig Pub: Magyar kem. folyoirat, 1957, 63, No 4-5, 143-149.

Abstract: The isotherms of CO₂ adsorption on activated carbon at 20 to 60° were taken down by the earlier described (RZh-Khim, 1955, 51625) dynamic gas-chromatographic method. The comparison of the isotherms obtained by this method with data obtained by the volumetric method shows that the results are practically identic, if physical adsorption was in question and chromatography was carried out at a low speed. Thus, the possibility of determining equi-

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-13-

HUNGARY/Physical Chemistry - Surface Phenomena, Adsorption, Chromatography, Ion Interchange.

B-13

Abs Jour: Referat. Zhurnal Khimiya, No 2, 1958, 4005.

librium relations at adsorption under the conditions of dynamic arrangement of the experiment is shown.

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SCHAY, G.

D-7

HUNGARY/Atomic and Molecular Physics - Gases

Abs Jour : Ref Zhur - Fizika, No 12, 1958, No 27329

Author : Halasz I., Schay G.

Inst : Central Research Institute of Chemistry, Hungarian Academy of Sciences, Budapest.

Title : On the Problem of the Coincidence of Adsorption Isotherms in Absolute Representation.

Orig Pub : Acta chim. Acad. scient. hung., 1958, 14, No 3-4, 315-324

Abstract : According to Brunauer, the value of $\lambda_1 - \lambda$ depends only on the nature of the adsorbate, and not on the adsorbent (λ_1 is the mean heat of adsorption of a monomolecular layer of adsorbate, λ is the normal condensation of the vapor, and $\lambda_1 - \lambda$ is the net heat of adsorption). The data obtained by the author on the adsorption of the nitrogen at -185°C with 60 different adsorbents with a specific surface of 13 to 309 square meter/gram (aluminum oxide, silica gel, activated carbon etc.) confirm this premise, but show that this is not true for adsorbent with a microscopic

Card : 1/2

HUNGARY/Atomic and Molecular Physics - Gases

D-7

Abs Jour : Ref Zhur - Fizika, No 12, 1958, No 27329

structure, for which a considerably higher heat of adsorptions than the mean one are correct. For all the non-micro-porous adsorbents investigated by the author, the values of $(\lambda_1 - \lambda)$ did not range beyond 820 ± 70 cal/mole. The absolute isotherms of nitrogen adsorption obtained for these adsorbents were in good agreement with each other; deviations in individual cases do not go beyond the limits that are usual in the determination of the surface area.

Card : 2/2

HUNGARY/Physical Chemistry. Colloid Chemistry. Dispersion Systems.

B

Abs Jour: Ref Zhur-Khimiya, No 22, 1958, 73503.

Author : Nagy F., Schay, G.

Inst : Academy of Sciences of Hungary.

Title : Solution Rate of Ethylene in Various Aqueous Suspensions.

Orig Pub: Acta chim. Acad. scient. hung., 1958, 14, No 3-4, 421-437.

Abstract: It is shown that the solution rate of ethylene (I) in water is determined by the diffusion rate, if the water was not stirred; but if it was stirred, the solution formally appears as a reaction of the 1st order, the rate constant rising linearly with the rate of stirring N. The solution rate of I

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HUNGARY/Physical Chemistry. Colloid Chemistry. Dispersion Systems.

Abs Jour: Ref Zhur-Khimiya, No 22, 1958, 73503.

in aqueous suspensions (S) of Al_2O_3 and talc of the concentrations from 0 to 40 g per liter at stirring also follows the equation of a reaction of first order and depends on the nature of the S, its dispersion and concentration, as well as on N. In a S of activated carbon, the dependence of the solution rate extrapolated to the moment $t = 0$ on the concentration is expressed by a curve with a maximum and a minimum.

Card : 2/2

K.

HUNGARY/Optics - Spectroscopy

Abs Jour : Ref Zhur - Fizika, No 7, 1959, 16651
 Author : Schay, G., Varsanyi, Gr., Dullien, F.
 Inst : Hungarian Academy of Sciences, Institute of Physical Chemistry, Budapest, Hungary
 Title : Investigation of the Raman Spectra of -Furyl and - Benzofuryl Ketoxines
 Orig Pub : Acta chim. Acad. scient. hung., 1958, 15, No 3, 273-284
 Abstract : To determine the configurations of the stereo-isomers, an experimental investigation was made of the Raman scattering spectra of pairs of isomers of the ketoxine series. The excitation was carried out by the lines Hg ϵ 4358 A and Hg δ 5461 A. A table is given for the determined values of frequencies, and the classification of the lines is considered. It is assumed that the

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no 7, 1959, 16651

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interactions of the furane ring and of the OH minus group of the oxine is responsible essentially for the difference in the frequencies of the vibrations in the syn isomers and anti-isomers. In the "syn" derivatives it is assumed that there is formed a weak hydrogen bond between the O -- atom of the hydroxyl of the oxine and the H --- atom of the ring, located in the ortho position. Localization of the pair of free electrons of the O -- atom decreases the degree of its conjugation with the electrons of the ring. In accordance with the data of the chemical observations, the maximum frequency of CN is ascribed to the "syn" derivatives. -- Yu. Gotlib

Card 2/2

HUNGARY/Physical Chemistry - Surface Phenomena. Adsorption.
Chromatography. Ion Exchange.

B

Abs Jour : Ref Zhur Khimiya, No 19, 1959, 67429

Author : Fejes, P., Schay, G.

Inst : Hungarian Academy of Sciences.

Title : On the Theory of Steady Chromatographic Gas Fronts.

Orig Pub : Acta chim. Acad. scient. hung., 1958, 17, No 3, 377-388

Abstract : Relationships between gas phase concentration, amount of gas contained in the stationary phase, and the flow rate determined earlier (RZhKhim, 1958, No 23, 76865) are subjected to a more rigorous mathematical analysis. In order to derive the stationary front equation, the authors neglect the effect of diffusion in the gas and the liquid, thermal effects of sorption, and the pressure loss in the column; it is assumed that the column free space before

Card 1/2

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POLAND / Physical Chemistry. Thermodynamics. Thermo- B-8
chemistry. Equilibria. Physicochemical Analy-
sis. Phase Transitions.

Abs Jour: Ref Zhur-Khimiya No 2, 1959, 3835.

Author : Schay, G., Varsanyi, G., and Billes, F.

Inst : Not given.

Title : The Construction of Isothermal Diagrams for Liquid-
Vapor Equilibria by the Static Method with the Aid
of Spectroscopic Analysis Data.

Orig Pub: Roczniki Chem, 32, No 2, 375-385 (1958) (in Polish
with summaries in English and Russian).

Abstract: Thermodynamic formulas are presented which make
possible the construction of isothermal vapor
pressure diagrams for liquid mixtures and the
calculation of the activity coefficients of
the components from a single set of experimental
data giving the molar concentration of the com-

Card 1/2

Distr: 4E2c(j)

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The rate of solution of ethylene in aqueous suspensions of various materials. Ferenc Nagy and Géza Schay. *Magyar Kém. Folyóirat* 64, 81-4(1958).—The rate of soln. of ethylene was studied in aq. solns. of Al_2O_3 and activated C. The process of dissoln. can be described formally as a 1st-order reaction, similar to that in pure water. The sp. velocity const. of the reaction depends on the type of materials used to prep. the suspension, the degree of dispersion, the quantity of suspension, and the r.p.m. of the mixer. The sp. velocity const. was greater than that in pure water, when the concn. of the suspension was small, and smaller than that in pure water when the concn. was large. In case of suspensions of adsorbents the velocity of sorption and desorption, extrapolated to $\tau = 0$, varied with the concn. of the suspension according to a max.-min. curve.

John Roberts

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1-9-9(NB)
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AUTUMN:

SCHAY, G.

An account of the 8th Mendeleev Congress on General and Applied Chemistry held in Moscow, March 16-23, 1959. p. 133

KOZLEMENYEI. Budapest, Hungary. Vol. 12, no. 1, 1959

Monthly list of East European Accessions (EEAI). IC. Vol. 9, no. 1, Jan., 1960.

Uncl.

SCHAY, C.

The 1958 scientific achievements of the Central Chemical Research
Institute of the Hungarian Academy of Sciences. p. 241.

KOZLEMHETŐ. Magyar Tudományos Akadémia. Kémiai Tudományok Osztálya.
Budapest, Hungary. Vol. 12 no. 2, 1959.

Monthly list of East European Accession (EEAI) IC, Vol ~~XXXXXXXXXXXXXXXXXXXX~~
9, no. 2, Feb. 1960

Uncl.

SCHAY, G.; FEJES, P.; NAGY, F.

Investigations on the adsorption and the adsorption rate of hydrogen on nickel catalysts. In English. P. 451.

ACTA CHIMICA. (Magyar Tudomanyos Akademia) Budapest, Hungary. Vol. 20, no.1, 1959.

Monthly list of East European Assessments (EEAI) LC Vol. 9, no. 2, Feb. 1960
uncl.

SCHAY, Geza; GIBER, Janos

Kinetics of the titration of methane by means of nitric acid
in gaseous phase. Pts. 1-2. Magy kem folyoir 65 no. 8:311-318
Ag '59.

1. Budapesti Muszaki Egyetem Fizikai-Kemiai Tanszeke es Eotvos
Lorand Tudomanyegyetem Fizikai-Kemiai Tanszeke, Budapest.

SCHAY, Geza; GIBER, Janos

Kinetics of the titration of methane with nitric acid in gaseous phase. Pt. 3. Magyar Kémiai Folyóirat 65 no. 9:347-351 S '59.

1. Budapesti Műszaki Egyetem Fizikai-Kémiai Tanszék és Eötvös Loránd Tudományegyetem Fizikai-Kémiai Tanszék, Budapest.
2. "Magyar Kémiai Folyóirat" szerkesztő bizottsági tagja (for Schay).

SCHAY, Geza; GIBER, Janos; TAMAS, Jozsef; SOOS, Demeter

Kinetics of the titration of methane with nitric acid in gaseous phase. Pt. 4. Magy kem folyoir 65 no. 9:351-354 S '59.

1. Budapesti Muszaki Egyetem Fizikai-Kemiai Tanszeke es Ipari Szerves-Kemiai Tanszeke.
2. "Magyar Kemiai Folyoirat" szerkeszto bizottsagi tagja.

SCHAY, G.

Simplified method for determination of the specific surfaces of porous adsorbents. 7 III. Isotherms of furan at 23°; surface requirements of furan, butane, and isobutane. P. Fejes, J. Király, and G. Schay (Ungar. Akad. Wiss., Budapest, Hung.). *Z. anorg. u. allgem. Chem.* 300, 72-80 (1959); cf. *C.A.* 51, 7102c.—The simplified method proposed in the earlier paper for calcn. of specific surfaces was used to calc. values from isothermal measurements of the adsorption of furan at 23° on 8 different adsorbents. The values agree to within 4% with those calcd. by the B.E.T. method. The mol. space requirements for butane and isobutane at 0° and for furan at 23°, detd. by comparison with values for N at 90°K., are 53, 54, and 42 sq. Å., resp. The magnitudes of these values suggest a preferred orientation on the adsorbent surfaces. Richard H. Jaquish

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SCHAY, G.

✓ Comparative studies on the determination of specific surface areas by liquid adsorption. G. Schay, L. Gy. Nagy, and T. Szekrenyessy (Polytech. Univ., Budapest, Hung.). *Periodica Polytech.* 4, 95-117 (1960).—Three methods of detg. surface area were applied to Al_2O_3 , SiO_2 , and C adsorbents. (1) Adsorption isotherms for miscible liquid pairs (e.g. mixts. of EtOH, benzene, cyclohexane, pyridine, etc.) were plotted as x_1 (decrease of amt. of component I in soln.) vs. x_1 (mol. fraction of component I), and any linear portion extrapolated to $x_1 = 0$. The intercept was assumed to give the amt. of component I, and the slope gave the total amt. of components I and II, in the surface layer. (2) Similar measurements with partially miscible liquids (e.g. BuOH in H_2O) yielding Brunauer Type I isotherms gave the amt. in the surface layer from extrapolation of amt. adsorbed to satn. (3) Total heat of immersion (in H_2O) was measured calorimetrically, and surface areas relative to a reference sample of known (B.E.T.) area were evaluated. Method (3) is useful for relative measurements on samples of the same material, whereas (1) yields results in agreement with the B.E.T. method and may be used for abs. surface area measurement.

George L. Gaines, Jr.

SCHAY, G.

Distr: 4F3a(VIII)

/ Further contributions to the solution of the system of differential equations of a gas chromatographic model. G. Schay, A. Petho, and P. Fejes (Hungarian Akad. Sci., Budapest). *Acta Chim. Acad. Sci. Hung.* 22, 285-90 (1960)(in German).—A math. model, considering the effect of the sorption process on the flow rate in gas chromatography, is discussed. Neglecting the kinetics of sorption, the processes are described by the following equations: (1) $x_s + (cx)_s + a_r - Dx_{ss} = 0$ and (2) $a_r + c_s = 0$, in which s is the local coordinate, r is the time, $x(s,r)$ and $a(s,r)$ are the concns. in the flowing and fixed phase, resp. (in the case of a pure gas $x = 1$), $c(s,r)$ is the velocity, and D is the diffusion const. Possible solutions of the above equations are explored for the case $D = 0$ and for the assumed linear sorption kinetics, $a_s = k(qx - a)$ with the boundary conditions: $x(0,r) = x_0(r)$, $x(s,0) = x^0$, $a(s,0) = qx^0$, and $a(0,r) = a_0$. Only the case of $x_0(r) = 1$ gave a complete explicit solution. Explicit solns. also were derived with the general boundary equations at the head and in the front of the head of the introduced gas phase. Steady-state solutions of equations (1) and (2), and criteria were established which are useful in deciding whether or not a sorption or desorption front may become steady with a given type of isotherm.

Lloyd Kahn

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JEP(c)
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SCHAY, G.

Distr: 4E3d

8W(BN)
JAS(NB)

/ Kinetics of the gas-phase nitration of methane by nitric acid. G. Schay and J. Giber (L. Eötvös Univ., Budapest). *Acta Chim. Acad. Sci. Hung.* 22, 409-33 (1960) (in English). —The reaction was studied in a flow system at atm. pressure, the HNO₃ being added in a stream of N₂. A 15-min. run produced about 0.1 g. of MeNO₂. The products and unreacted starting materials were sepd. into liquid and gas fractions in solid CO₂-acetone traps. The liquid fraction consisted of MeNO₂ (detd. as nitrite by the method of Giber and Meisel, *CA* 54, 3053b), HNO₃, and NO₂ (detd. volumetrically). The products in the gaseous fraction consisted mainly of NO (detd. by an absorption procedure) with small amts. of CO and CO₂. Percent conversions, i.e. HNO₃ consumed/HNO₃ introduced, were measured with contact times between 0.5 and 7 sec. and at temps. between 280° and 480°. Graphs of % conversion against contact time or temp. showed max. The max. conversion was 15.8% at a temp. of 430° and with a contact time of 2 sec. When the ratio CH₄/HNO₃ (initial concns.) was varied between 1 and 25 at 450°, the % conversion reached a limiting value of about 13%. The nature of the products and the results on % conversion were interpreted as meaning that the nitration of CH₄ was accompanied by (1) a parallel

oxidn. reaction producing NO, and (2) one or more consecutive decompn. reactions of MeNO₂. 7 When the ratio HNO₃/CH₄ was varied from 1 to 10 the % conversion showed a sharp max. of about 12% at a HNO₃/CH₄ ratio of 4, but no satisfactory explanation could be suggested. The initial over-all rate of nitration of CH₄ was given approx. by, $10^{11.5} e^{-44000/RT} [\text{CH}_4]^{0.5} [\text{HNO}_3]$, where the A-factor is in mole⁻¹ l. sec.⁻¹, the activation energy in kcal./mole, and the concns. in mole/l. Added NO and NO₂ were found to markedly inhibit the reaction, whereas H₂ and CO inhibited it to a lesser extent. A mechanism was proposed for the initial stages of the reaction: HNO₃ + N₂ → HO + NO₂ + N₂ (1), HNO₃ + CH₄ → HO + NO₂ + CH₄ (2), HO + CH₄ → H₂O + CH₃ (3), HO + HNO₃ → H₂O + NO₂ (4), CH₃ + NO₂ → CH₃NO₂ (5), CH₃ + NO₂ → CH₃O + NO (6), and the steady-state treatment gave results substantially in agreement with those detd. exptl. Thermodynamic data are quoted in support of reaction (6), which is postulated to explain the NO in the products. The possibility of short chains contributing to the over-all mechanism could not be excluded. It was clearly shown that neither NO₂ nor mol. HNO₃ can bring about the nitration of CH₄ under the conditions of the expts. James A. Kerr

SCHAY, G.; GIVER, J.

Kinetics of the nitration of methane by nitric acid in gaseous phase. I. an experimental method II. Kinetic description of altrating reaction. p. 311.

MAGYAR KEMIAI FOLYOIRAT. (Magyar Kemikusok Egyesulete) Budapest, Hungary
Vol. 65, no. 8, Aug. 1960

Monthly List of East European Accession (EEAI), LC, Vol. 9, no. 2, Feb. 1960

Uncl.

7 4
 ✓ Determination of the surface area of adsorbents from the
 adsorption isotherms of binary liquid mixtures. Lajos
Nagy and Géza Schay (Műszaki Egyetem, Budapest;
Hung.). Magyar Kém. Folyóirat 66, 31-7(1960).—The
 surface area can be graphically detd. from the isotherms if
 the adsorption was purely phys. (no chemisorption took
 place), if the isotherm had a linear section (indicating const.
 surface phase compn.), if the concn. change was caused by
 adsorption only (the adsorbent was dry and free from sol.
 components), and if the 2 liquids were miscible in all pro-
 portions. An extension of the linear section to the 2 axes
 indicates the compn. of the unimol. surface phase and the
 abs. amt. of each ingredient. L. G. Arvai

SCHAY, GEZA

5

Surface-area determination by measurement of the heat of immersion. Geza Schay, Lajos György Nagy, and Tamás Székrenyey (Műszaki egyetem, Budapest, Hung.). Magyar Kém. Folyóirat: 66, 271-8 (1960); cf. Boyd and Harkins, CA 36, 4002⁴.—The method of Harkins and Jura (CA 38, 5125⁹) is not applicable to porous adsorbents without modification. The heat of immersion is measured by plotting the temp. against the time for a Dewar vessel, elec. heated at a const. rate, while the adsorbent is released into the liquid by breaking its thin-walled container. For oxide adsorbents where the surface is of the order 100–300 sq. m./g. the measurements can be carried out in calorimeters sensitive to 0.1 cal. Three types of Al_2O_3 were measured, and the specific surfaces obtained are compared with those obtained by 3 other methods. This method is most suitable for the detn. of relative surface areas.

E. E. Richards

SCHAY, Geza, r.tag akademikus (Budapest)

Development in physical chemistry and its achievements since the liberation; a contribution to the account by the Section's leadership. Kem tud kozl MTA 14 no.2:177-182 '60. (EERI 10:2)
(Hungary--Chemistry, Physical and theoretical)
(Hungarian Academy of Sciences)

39889

5.5600

S/044/62/000/007/043/100
C111/C222

AUTHORS: Schay, G., Pethö, A., Fejes, P.

TITLE: Further remarks on the solution of the system of differential equations of a gaschromatographic model

PERIODICAL: Referativnyy zhurnal, Matematika, no. 7, 1962, 70, abstract 7B337. ("Acta chim. Acad. scient. hung.", 1960, 22, no. 3, 285-299)

TEXT: The processes in a variable gaschromatographic profile can be described by the continuity equations

$$\frac{\partial x}{\partial \tau} + \frac{\partial cx}{\partial z} + \frac{\partial a}{\partial \tau} - D \frac{\partial^2 x}{\partial z^2} = 0,$$

$$\frac{\partial (1-x)}{\partial \tau} + \frac{\partial c(1-x)}{\partial z} - D \frac{\partial^2 (1-x)}{\partial z^2} = 0,$$

where z -- local coordinate, τ -- time, $x(z, \tau)$ and $a(z, \tau)$ -- concentrations in the movable and in the immovable phase, $c(z, \tau)$ -- ve-

Card 1/2

Further remarks on the solution ...

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C111/C222

locity, D -- diffusion coefficient. In the first part of the paper the authors consider instationary solutions under absent diffusion and under linear kinetics, i.e. it is put $D = 0$,

$$\frac{\partial a}{\partial \tau} = k(qx - a) ,$$

where k -- constant velocity of the desorption from the immovable phase, q the constant ratio of the sorption components in the state of equilibrium of the two phases. It is shown that explicit solutions exist only for $x_0(\tau) = 1$, where $x_0(\tau) = x(0, \tau)$. If the boundary and initial conditions are arbitrary, then one can obtain an explicit form of the solutions in the domain before the "peak" and in the "peak". In the second part stationary solutions are considered; a criterion for the realizability of the sorption or desorption front is obtained.

[Abstracter's note: complete translation.]

Card 2/2

SCHAY, Geza, prof., dr. (Budapest); GIBER, Janos (Budapest)

Kinetics of the gas phase nitration of methane by nitric acid. Acta
chimica Hung 22 no.4:409-433 '60. (EEAI 10:2)

1. Institute for Physical Chemistry, Technical University, Budapest
(for Schay). 2. Department of Physical Chemistry and Radiology,
Lorand Eotvos University, Budapest (for Giber).
(Gases) (Nitration) (Methane) (Nitric acid)

SCHAY, Geza; NAGY, Lajos Gyorgy; SZEKRENYESY, Tamas

Surface determination by means of immersion heat. Magyar kem
folyoir 66 no.7:271-275 J1 '60.

1. Budapesti Muszaki Egyetem Fizikai Kemiai Tanszeke. 2."Magyar
Kemiai Folyoirat" szerkeszto bizottsagi tagja.

SCHAY, Geza

"Absorption spectra in the ultraviolet and visible region" by L. Lang, J.Szoke, Gyorgy Varsanyi, and M.Vizessy. Reviewed by Geza Schay. Magy kem folyoir 66 no.9:374 S '60.

1. "Magyar Kemiai Folyoirat" szerkeszto bizottsagi tagja.

SCHAY, Geza, ketszeres Kossuth-dijas akademikus (Budapest)

Long-range research and everyday practice in chemistry; statement by Academician Geza Schay, twice Kossuth-prize winner. Ujit lap 13 .
no.10:7 My '61.

1. Magyar Tudomanyos Akademia Kozponti Kemiai Kutato Intezetenek
igazgatoja.

(Hungary—Chemical industries)

36527

S/081/62/000/006/026/117
B171/B101

✓ 5700

AUTHORS:

Jász, Á., Lengyel, T. (II); Jász, Á., Lengyel, T.,
Schay, G. (III)

TITLE:

Investigations of radioactive equilibria by the radioactive
tracer method. II. Investigations concerning the
deactivation factor in binary monovalent cationic systems.
III. Investigations relating to the deactivation factor
in binary multivalent cationic systems

PERIODICAL:

Referativnyy zhurnal. Khimiya, no. 6, 1962, 82-83,
abstract 6B574 (Acta chim. Acad. scient. hung., v. 27,
no. 1-4, 1961, 247-252; 253-260)

TEXT: II. The deactivation factor (DF) is defined by the authors as the
ratio of the initial concentration of the ion to be extracted to the
equilibrium concentration of the same ion in the presence of an ion-
exchange resin. In Tl-Na, Tl-K, Tl-Cs, Tl-Ag, Cs-H, Cs-Na, Cs-K, Ag-H,
Ag-Na, and Ag-K systems, the DF varies with the exponent (i.e., with the
negative logarithm) of the ionic force, and the curve representing these

Card 1/3

Investigations of radioactive...

S/081/62/000/006/026/117
B171/B101

variations shows a maximum (Mx). The abscissa of the Mx corresponds to the optimal dilution for extraction of the given ion, with the help of ionite. The values of the DF maxima increase when the atomic weights of the alkali metal, reacting with the selectively adsorbed ion, decrease. The authors explain the high selectivity relative to Tl and Ag by the high polarizability of these ions. If the investigated ions are arranged in the order of increasing maximum values of DF, this sequence will correspond to some order of relative selectivities. The selectivity of ion adsorption depends not only on the nature of ions but also on the concentration of the solution. If a dilute solution is deactivated, only 20 to 30 % of the exchange capacity of the ionite are utilized. Further use of the resin is not expedient because the DF becomes too low and the duration of deactivation shows a considerable increase.

III. In Th—Cs, Fe—Cs, Co—Cs systems, the DF varied also with pC and the curve representing these variations shows a Mx, the position of which, for multivalent-monovalent ion pairs, is displaced proportionally to the ratio between the respective valencies. For the multivalent ion pairs this relationship is not fulfilled. For Fe-Al and Co-Ca pairs, a monotonic increase of DF with pC has been established. For some

Card 2/3.

Investigations of radioactive...

S/081/62/000/006/026/117
B171/B101

Multivalent cation pairs (e.g., Th-Fe, Fe-Co), a departure from the law of mass action has been established and attributed by the authors to the lability of the ionite capacity and to its variation with the concentration of the solution. A theoretical equation, confirmed by experimentation, has been proposed for calculation of the variations of ionite capacity.
[Abstracter's note: Complete translation.]

Card 3/3

SCHAY, G., prof. (Budapest, XI., Sztoczek u.2); NAGY, L.Gy. (Budapest, XI., Sztoczek u.2); SZEKRENYESY, T. (Budapest, XI., Sztoczek u.2)

Comparative studies on the adsorption equilibrium of liquid mixtures on solid-liquid resp. liquid-gas interfaces. Periodica polytechnica chem 6 no.2:91-111 '62.

1. Department for Physical Chemistry, Polytechnical University, Budapest. 2. Editorial Board member, "Periodica Polytechnica Chemical Engineering" (for Schay).

ERDEY-GRUZ, Tibor, akademikus; BRUCKNER, Gyozo, akademikus; LENGYEL, Bela; TELEGDY-KOVATS, Laszlo, a tudomanyok doktora; HARDY, Gyula, kandidatus; GERECS, Arpad, akademikus; FOLDI, Zoltan; WOLKOBBER, Zoltan; TUDOS, Ferenc, kandidatus; PURMAN, Jenő; KRAUSZ, Imre, kandidatus; ERDEY, Laszlo, akademikus; SCHAY, Geza, akademikus

An account of the 1961 work of the Section of Chemical Sciences, Hungarian Academy of Sciences. Kem tud kozl 18 no.3:343-394 '62.

1. Magyar Tudományos Akademia Kemiai Tudomanyok Osztalyanak titkara, es "A Magyar Tudományos Akademia Kemiai Tudomanyok Osztalyanak Kozlemenyei" szerkesztoje (for Erdey-Gruz). 2. Akademiai levelezo tag (for Lengyel and Foldi). 3. "A Magyar Tudományos Akademia Kemiai Tudomanyok Osztalyanak Kozlemenyei" szerkeszto bizottsagi tagja (for Bruckner, Erdey, Foldi, Gerecs, Hardy, Lengyel, Schay, Tudos).

SCHAY, Geza, akadémikus

An account of the Bratislava conference on gas chromatography.
Kem tud kozl 18 no.3:551-552 '62.

1. Budapesti Műszaki Egyetem Fizikai Kémiai Tanszéke, és "A Magyar Tudományos Akadémia Kémiai Tudományok Osztályának Közleményei" szerkesztő bizottsági tagja.

SCHAY, Geza, prof., dr. (Budapest II., Pusztaszeri ut 59-67)

Aladar Buzagh, 1895-1962; obituary. Acta chimica Hung
31 no.4:309-313 '62.

1. ~~Zentral~~forschungsinstitut der Chemie der Ungarischen
Akademie der Wissenschaften, es "Acta Chimica Academiae
Scientiarum Hungaricae" szerkeszto bizottsagi tagja.

SCHAY, Geza, prof., dr. (Budapest II., Pusztaszeri ut 59-67);
PETHO, Arpad, dr. (Budapest II., Pusztaszeri ut 59-67)

Data on the mathematical foundations of stoichiometry.
Acta chimica Hung 32 no.1:59-67 '62.

1. Zentralforschungsinstitut für Chemie der Ungarischen
Akademie der Wissenschaften.

SCHAY, Geza, prof., dr. (Budapest II., Pusztaszeri ut 59-67)

"Absorption spectra in the ultraviolet and visible region.
Vol. II.", edited by Dr. L. Lang. Reviewed by G. Schay.
Acta chimica Hung 32 no.1:129-130 '62.

1. Zentralforschungsinstitut fur Chemie der Ungarischen
Akademie der Wissenschaften.

FEJES, Pal; CZARAN, Laszlone; SCHAY, Geza

Newer investigations in the field of frontal gas chromatography considering the changes caused by the flow velocity sorption. I. Determination of adsorption isotherms from the shapes of stationary fronts in the diffusion range. Magy kem folyoir 68 no.1:11-19 Ja '62.

1. Magyar Tudomanyos Akademia Kozponti Kemiai Kutato Intezete, Budapest.
2. "Magyar Kemiai Folyoirat" szerkesztobizottsagi tag (for Schay).

(Gases) (Chromatography) (Sorption)

SCHAY, Geza

→ Aladar Buzagh, 1895-1962; obituary. Magyar kem folyoir 68 no.2:
43-44 F '62.

1. "Magyar Kemiai Folyoirat" szerkeszto bizottsagi tagja,

SCHAY, Geza

"Absorption spectra in the ultraviolet and visible region.
Vol. 2", ed. by [dr.] L.Lang. Reviewed by Geza Schay. Magyar
kem.folyoir 68 no.10:463 0 '62.

1. "Magyar Kemiai Folyoirat". szerkeszto bizottsagi tagja.

SCHAY, G.

"Thermodynamics with quantum statistical illustrations" by P.T. Landsberg. Reviewed by G. Schay. Acta phys Hung 15 no.3:282-283 '63.

SCHAY, Geza, akademikus

An account of my trip to the German Democratic Republic, France,
and the German Federal Republic. Kem tud kozl MT 19
no.1:127-133 '63.

1. Magyar Tudomanyos Akademia Kozponti Kemiai Kutato
Intezete, Budapest; "A Magyar Tudomanyos Akademia Kemiai
Tudomanyok Osztalyanak Kozlemenyei" szerkeszto bizottsagi
tagja.

KALLO, Denes; SCHAY, Geza; NAGY, Ferenc; HORANYI, Gyorgy

Isomerization of n-butenes on aluminosilicate catalyzer.II.
Magy kem folyoir 68 no.9:381-389 S '62.

1. Magyar Tudomanyos Akademia Kozponti Kemiai Kutato Intezete,
Budapest. 2. "Magyar Kemiai Folyoirat" szerkeszto bizottsagi
tagja (for Schay).

SCHAY, G.

"Peaceful uses of atomic energy; its advantages and hazards"
by [Dr. Ing.] L.V. Erichsen. Reviewed by G. Schay. Periodica
polytechn chem 7 no.2:169 '63.

1. Mitglied, Redaktionskollegium, "Periodica Polytechnica-
Chemical Engineering."

SZABO, Zoltan, egyetemi tanar; POLINSZKY, Karoly, a kémiai tudományok doktora; MATOLCSY, Kalman, a kémiai tudományok kandidátusa; LEVAY, Gyula; NAGY, Ferenc, a kémiai tudományok doktora; BERECS, Endre, a kémiai tudományok kandidátusa docens; KORACH, Mor, ~~akadémikus~~; LENGYEL, Sandor, a kémiai tudományok doktora; SCHAY, Geza, akadémikus, egyetemi tanar; ERDEY-GRUZ, Tibor, akadémikus

1. Problems of and experiences with coordinating the main task of the long-range research entitled "Investigation of the mechanism of chemical processes as well as the regularities of chemical industrial operations." Kem tud kozl MTA 20 no.2: 199-229 '63.

1. Magyar Tudományos Akadémia levelezo tagja; "A Magyar Tudományos Akadémia Kémiai Tudományok Osztályának Közleményei" szerkeszto bizottsagi tagja (for Szabo). 2. Veszpremi Vegyipari Egyetem rektora; "A Magyar Tudományos Akadémia Kémiai Tudományok Osztályának Közleményei" szerkeszto bizottsagi tagja (for Polinszky). 3. Magyar Tudományos Akadémia Központi Kémiai Kutató Intézete igazgatóhelyettese (for Nagy). 4. Eötvös Loránd Tudományegyetem Fizikai Kémiai és Radiológiai Tanszéke. 5. Magyar Tudományos Akadémia Muszaki Kémiai Kutató Intézetének igazgatója; "A Magyar Tudományos Akadémia Kémiai Tudományok Osztályának Közleményei" szerkeszto bizottsagi tagja (for Korach). 6. Akadémia Elektrokémiai Kutató Csoport vezetője; "A Magyar Tudományos Akadémia Kémiai Tudományok Osztályának Közleményei" szerkeszto bizottsagi tagja (for Lengyel). (cont. on next card.)

SCHAY, Geza; NAGY, Lajos Gyorgy

Possibilities for determining the specific surface of
adsorbents by means of the adsorption isotherms of
liquid mixtures. Magy kem lap 19 no. 4:173-179 Ap '64.

1. Budapest Univeristy of Technical Sciences.

NAGY, Lajos; SCHAY, Geza

Adsorption of two-component liquid mixtures on solid
boundary surfaces. Pt. 1. Magyar folyoir 70 no. 1:
33-44 Ja '64.

1. Budapesti Muszaki Egyetem Fizikai-Kemiai Tanszeke.
2. "Magyar Kemiai Folyoirat" szerkeszto bizottsagi
tagja (for Schay).

ERDEY-GRUZ, Tibor, akademikus; BRUCKNER, Gyozo, akademikus; VARGHA, Lázló;
KORACH, Mor, akademikus; FREUND, Mihály, akademikus; FODOR, Gábor,
akademikus; GERECs, Arpad, akademikus; SCHAY, Géza, akademikus;
BITE, Pál, kandidatus; BOGNAR, Rezso, akademikus; FARKAS, Loránd,
kandidatus

An account of the work of the Section of Chemical Sciences, Hungarian
Academy of Sciences. Kem tud kozl MTA 22 no.2:109-152 '64.

1. Secretary, Section of Chemical Sciences, Hungarian Academy of
Sciences, and Editor, "A Magyar Tudományos Akadémia Kémiai Tudományok
Osztályának Közleményei", Budapest (for Erdey-Gruz). 2. Editorial
board member, "A Magyar Tudományos Akadémia Kémiai Tudományok
Osztályának Közleményei" (for Bruckner, Korach, Freund, Fodor,
Gerecs, Schay and Bognar). 3. Corresponding member, Hungarian
Academy of Sciences, and Editorial board member, "A Magyar
Tudományos Akadémia Kémiai Tudományok Osztályának Közleményei"
(for Vargha).

SANDOR, Janos, aspirans; SCHAY, Geza, akademikus

Thermodynamics of electrochemical transport processes. Pt.3.
Kem tud kozl MTA 22 no.3/4:347-370 '64.

1. Chair of Physical Chemistry, Budapest Technical University.

L 45342-66 EWP(j) RM

SOURCE CODE: HU/2502/66/047/001/0013/0022

ACC NR: ATG033595

AUTHOR: Beyer, Hermann--Beyer, Kh. (Doctor; Budapest); Fejes, Pal--Feyesh, P. (Doctor);
Schay, Geza--Shay, G. (Professor; Doctor); Varga, Karoly

ORG: Central Research Institute for Chemistry, MTA, Budapest

TITLE: New investigations in the field of frontal gas chromatography taking into account the flow rate during sorption. Part 3: Determination of theoretical plate height values with the aid of frontal gas chromatography [This paper was presented at the All-Union Conference on Gas Chromatography in Moscow in May 1964.]

SOURCE: Academia scientiarum hungaricae. Acta chemica, v. 47, no. 1, 1966, 13-22

TOPIC TAGS: gas chromatography, sorption

ABSTRACT: An expression was derived for the characterization of the height of the theoretical plate for the frontal variant in gas chromatography and the values obtained with the aid of this expression were compared with data obtained by means of elution chromatography. Orig. art. has: 3 figures and 11 formulas. [Orig. art. in German] [JPRS: 34,669]

SUB CODE: 07 / SUBM DATE: 01Mar65 / ORIG REF: 003 / OTH REF: 004

Card 1/1

0920 1638

616.921.5:576.8.097.35

SOLOMON, I., GRIGORIU, Th., SCHEAU, Alla, DUVAN, Xenia, and
NITULESCU, C., of the State Inspectorate for Hygiene and Labor
Safety (Inspectia de Stat pentru Igiena si Protectia Muncii),
Bucharest.

"A Study of the Average Level of Antigrippal Antibodies By
Means of the HAI Reaction on Sample Mixtures of Sera."

Bucharest, Studii si Cercetari de Inframicrobiologie, Vol 17,
No 2, 66, pp 129-132.

Abstract: The authors studied the average level of HAI anti-
grippe antibodies on 33 sample mixtures of sera, each being
obtained from approximately 2,000 to 2,500 individual sera
from residents of Bucharest. The average level of antibodies
determined from the sample mixtures agreed with the results
obtained with individual serum samples (geometric mean of the
individual titers), indicating that this method can be used to
advantage to determine the immunological profile of a population.
Includes one table, one figure and two Russian refer-
ences. -- Manuscript submitted 24 February 1965.

1/1

- 23 -

SCHECHTER, E.

The determination of errors in certain proceedings of numerical
integration of differential equations. Studii cerc mat Cluj 9 no.1/4:
343-350 '58. (EEAI 10:5)

1. Universitatea "V.Babes," Catedra de analiza.
(Differential equations) (Aggregates)

SCHECK, P., Dr.; DVORAK, J., (prom. lekar)

Experience with neuroplegic drugs in traumatology, Acta chir. orthop.
traum. cech. 25 no.3:213-218 May 58.

1. Chirurgické oddelení OUNZ v Benesove, predn. doc. Dr. A. Furst.
(HIBERNATION, ARTIFICIAL, ther. use
in traumatol. (Cz))
(WOUNDS AND INJURIES, ther.
artif. hibernation in traumatol. (Cz))

SCHECK, Pavel

Anesthesia with steroid preparations. Rozhl. chir. 40 no.4:222-231
Ap '61.

1. Nemocnice na Bulovce v Praze 8.

(HYDROXYDIONE anesth & analg)

SCHECK, P.; HORSKY, E.

Possibilities of general anesthesia with reference to the use of hydroxydione in eye surgery. Cesk. oftal 19 no.1:61-66 Ja '63.

1. Očni oddeleni klinické základny UDL v nemocnici v Praze 8 -
na Bulovce, prednosta doc. dr. F.V.Michal.
(HYDROXYDIONE) (ANESTHESIA GENERAL) (OPHTHALMOLOGY)

CZECHOSLOVAKIA

SCHECK, P., MD.

Bulovec Hospital (Nemocnice na Bulovce), Prague

Prague, Prakticky lekar, No 5, 1963, pp 171-173

"Selection of Anesthesia in Kidney Ailments."

SRAMKOVA, L.; SCHECK, P.; DUNIEWICZ, M.

Treatment of a case of severe tetanus with prolonged curarization. Cas.lek.cesk.103 no.8:214-218 21 F'64.

1. Anesteziologicke oddeleni nemocnice na Bulovce v Praze 8, (vedouci: MUDr. P. Scheck) a Infekcni klinika nemocnice na Bulovce v Praze 8; (prednosta: prof.dr. J.Prochazka, DrSc).

*

SCHECK, P.

Possibilities for the use of hydroxydione in otorhinolaryngological surgery. Cesk. otolaryng. 13 no.2:100-103 Ap '64.

1. Nemocnice na Bulovce, Praha 8.

EXCERPTA MEDICA Sec 16 Vol. 5/11 Cancer Nov 57

4422. SCHÉDA W. Neurol. Psychiat. Univ. Klin., Pécs. Atypische Augensymptome bei chromophoben bzw. malignen Hypophysenadenomen *Atypical ocular symptoms in chromophobic or malignant hypophyseal adenomas* Nervenarzt 1956, 27/11 (491-495) Tables 1 Illus. 3

It is shown that chromophobic or malignant hypophyseal adenomas may cause unusual symptoms. Five cases are described in which atypical reduction of the field of vision, papilloedema and paralysis of the ocular muscles were observed. X-ray investigation of the sella turcica in general may give the right diagnostic indication.

Busche - Göttingen

SCHEDA, Vilmos, dr.

Atypical eye symptoms in chromophobe adenoma of the pituitary gland.
Orv. hetil. 97 no.36:989-992 2 Sept 56.

1. A Pecsí Orvostudományi Egyetem Ideg- és Elmeklinika-jának
közleménye.

(PITUITARY GLAND, neoplasms

chromophobe adenoma, atypical eye symptoms, diag. (Hun))

(EYE, in various dis.

chromophobe adenoma of pituitary, atypical symptoms,
diag. (Hun))

SCHEDA, Vilmos, Dr.

Necrosis of the cerebral cortex following acute alcoholic intoxications.
Ideg. szemle 12. no.9:263-266 Sept 59

1. A gyongyosi Bugat Pal Korhaz (igazgato: Fejes Istvan dr.) prosec-
tura, janak kozlemenye.

(CEREBRAL CORTEX, dis.)

(ALCOHOLIC INTOXICATION, compl.)

SCHEDA, Vilmos, dr.

Asymptomatic form of Sturge-Weber syndrome. Gyermekgyógyászat 12
no.11:337-339 N '61.

1. A gyöngyösi Bugat Pál kórház közleménye. (Igazgató: Fejes István)

(ANGIOMATOSIS diag)

SZARVASY, Gyorgy; SCHEDA, Vilmos

Telangiectasic ataxia, Louis-Bar syndrome. Szemeszet 98 no.1:23-28
Mr '61.

1. A gyongyosi Bugat Pal korhaz (Igazgato: Fejes Istvan) szemeszeti
(Foorvos: Szarvas Gyorgy) es ferfi ideg-elmeosztalyanak (Foorvos:
Rath A. Zoltan) kozlemenye.

(ATAXIA compl) (TELANGIECTASIS compl)

HUNGARY

SCHEDA, Vilmos, Dr, CSANADI, Laszlo, Dr; Bugat Pal Hospital (Bugat Pal Korhaz), Gyongyos, (director: FEJES, Istvan, Dr).

"Brain Chamber Rupture in Connection with Hydrocephalus Occlusus."

Budapest, Ideggyogyaszati Szemle, Vol XIV, No 5, May 63, pp 152-158.

Abstract: [Authors' German summary] The authors report a case of hydrocephalus. The aquaeductus Sylvii was closed by a 1 mm thick glia membrane which resulted in the occlusion hydrocephalus. During the development of the hydrocephalus, a spontaneous improvement occurred due to a rupture of the chamber wall on the left frontal convexity. Through this the liquor reached the subarachnoidal space and was reabsorbed. After the discussion of this case, the authors describe the forms of occlusion of the aqueduct, the atrophy of the brain substance as well as the prognosis, above all the possibility of spontaneous improvement. 2 Eastern European, the rest Western references.

2473

[1/1

SCHDEL, A.

Utilization of working scale and gas washing mud. p. 97.
KOHASZATI LAPOK. (Magyar Banyaszati es Kohaszati Egyesulet) Budapest.
Vol 11, no. 3, Mar 1956.

SOURCE: EEAL, Vol 5, no. 7, July 1956.

SCHERDEL, A.

Study of the direct reduction. Acta techn Hung 49 no.1/2:
131-147 '64.

SCHADEL, Andor, dr.

Briquetting of iron ores. Koh lap 93 no.1:32-38 Ja '60.

SCHEDER, Andor, dr.

Dr. Andor Scheder's reply to the remarks made by Jozsef Halsz and
Janos Horvath. Koh lap 98 no.4:176-177 Ap '65.

SCHÉDEL, Andor, dr. (Budapest)

Materials, statics, and the style of architecture. Term tud kozl
7 no.2:73-76 F '63.

SCHDEL, Andor

Role of limestone in the blast furnace. Muszaki kozl
MTA 32 no.1/4:187-198 '63.

SCHEDER, Andor

New ways of ore dressing. Muszaki kozl MTA 32 no.1/4:
239-249 '63.

SCHEDER, Andor

Beginnings of clay industry. Epitoanyag 16 no.7:267-269 J1 '64.

SCHTEDEL, Andor, dr.

Ancient terminology of metallurgy and metalworking. Koh lap
97 no.7:Suppl:Ontode 15 no.7:158-161 J1 '64.

COUNTRY : Hungary H-23
 CATEGORY :
 19487
 ABS. JOUR. : RZKhim., No. 51960, No.
 AUTHOR : Scheel, W. S.
 INST. : Hungarian Academy of Sciences
 TITLE : Oxidative Products of Paraffin and Their Application
 in the Production of Greases
 ORIG. PUB. : Acta Chim Acad Sci Hung., 18, No 1-4, 261-270 (1959)
 ABSTRACT : The author recommends the use of synthetic paraffin
 obtained in the GDR by the Fischer-Tropsch process
 at atmospheric pressure (notwithstanding the fact
 that these contain 30-40% of unwanted isoparaffins)
 and of the paraffin obtained from brown coal resin
 as raw materials in the production of synthetic
 fatty acids. The products from the oxidation of
 paraffins may be used in the production of greases
 without separation of the fatty acids and without
 saponification. The author notes in particular the
 323
 CARD: 1/2

COUNTRY : Hungary H-23
 CATEGORY :
 19487
 ABS. JOUR. : RZKhim., No. 51960, No.
 APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001447520011-6"
 AUTHOR :
 INST. :
 TITLE :
 ORIG. PUB. :
 ABSTRACT : good results obtained from the application of such
 greases in the lubrication of the skids in ship-
 yards.
 S. Rozenfel'd
 CARD: 2/2

SCHER, Nicolae; DAROCZI, Francisc

Increased exigence concerning the effectiveness of cultural work. Munca sindic 6 no.4:23-27 Ap '62.

1. Consiliul Regional al Sindicatelor Mures-Autonoma Maghiara.

VANACEK, J.; KREBS, V.; SCHETROVA, E.; BIELEKE, W.

Apparatus for intracerebral injections in mice. Cesk. fysiол. 8 no.3:
255 Apr 59.

1. Farmakologicka katedra fak. detskeho lek. Praha. Ustav pro kortikofis-
ceralni patologii v Berline-Buchu, Prednesno na III. fysiologickych dnech
v Brne den 15. 1959.

(BRAIN,
intracerebral inject. appar. (Cz))
(INJECTIONS, appar. & instruments,
same)

SCHEFFER, F

Czechoslovakia/ Microbiology. Technical Microbiology F

Abs Jour : Ref Zhur-Biol., No 13, 1958, 57576

Author : Scheffer F., Brune N.

Inst : Not given

Title : Methods of Determination of Microbiological
Processes in Manure in Compact (cold) Storage
and in Composts

Orig Pub : Sbor. Ceskosl. akad. zemed. ved. Rotsl. vyroba,
1956, 29, No 9-10, 1037-1041

Abstract : No Abstract

Card 1/1

SCHEFFER, V.

Scheffer, V.

The regional geophysics of Transdanubia

Acta Technica (Magyar Tudományos Akadémia) Budapest
Vol. 1, No. 2 1951, p.83

From: E. European Accessions List, Hungary, Vol. 1, No. 8, June 1952, p.28

SCHNEFER, V.

HUNG .

330.03

58. The latest geophysical prospecting methods used in Hungary — *A geofizikai kutatás hazánkban alkalmazott legújabb módszerei* — V. Scheffer. (Hungarian Engineering — *Magyar Technika* — Vol. 8, 1951, No. 12, pp. 706--712, 15 figs.)

A summary of the latest methods of geophysical prospecting introduced since the end of the second world war in Hungary is given. Of the most recent practical gravitational methods the results obtained by the deduction of regional affects and the plotting of secondary gravitational anomalies, and in applied seismics the results obtained by the Poulter method are illustrated. Of the new methods of electric survey the BKZ method, of the surface prospecting methods that of telluric currents, in bauxite surveying the measuring of spontaneous potentials and electrical vertical drilling have been successfully applied in practice. Besides the above, geothermal and geochemical methods have also been used satisfactorily.

2

SCHEFFER, V.

"Isostasy", P. 253. (ACTA TECHNICA, Vol. 9, No. 3/4, 1954, Budapest, Hungary)

SO: Monthly List of East European Accessions, (EAL), IC, Vol. 4, No. 1, Jan. 1955, Uncl.

SCHEFFER, V.

"Gyorgy Barta's Foldmagnetesegi ero Magyarorszagon. A Budakeszi Obszervatorium
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55. Relations between isostatic anomalies and orogenic vergences (In German) — V. Schieffer (*Acta Technica Academiae Scientiarum Hungaricae* — Vol. 10, 1955, No. 1-2, pp. 12-29, 3 figs.) GP

By studying the map of European isostatic anomalies and the vergences of Mediterranean chains, the author has established a relationship between the vergences of mountain chains and isostatic anomalies. Accordingly, orogenic vergences generally tend away from zones of maxima on the isostatic anomaly map, denoting excesses of mass, toward depression areas i.e. parts lacking mass. The described conformity verifies the tendency of the Earth's crust to bring about isostatic equilibrium through horizontal crustal movements.

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1. Isostatic character of level changes in Hungary and the possibility of temporarily reevaluating the altitude of bench marks (In German) -- V. Scheffer (Acta Scientiarum Academiae Scientiarum Hungaricae Vol. 10, No. 3-4, pp. 247-260, 6 figs)

On the basis of comparing the gravity anomaly chart for Hungary with the changes in the altitude of bench marks for the past 40 years this preliminary study establishes that level changes in Hungary are of an isostatic character. To assess the magnitude of level changes the author introduces the annual level change caused by the unit of gravity anomaly as a measure index. This value at present is about $-0.1 \frac{\text{mm}}{\text{year}}$ for the Great Hungarian Plain.

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Possibilities of the use of gamma logging in Hungarian coal mining.
p. 598.

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